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ABSTRACT

Major investigations have shown that children care little for social studies as a school subject. Therefore, a closer look was taken at social studies textbooks in order to ascertain if the reading difficulty of the texts was an important cause behind the children's dislike. This study evaluated the reading levels of 41 social studies texts adopted by the state of Florida for grades 1 through 6. The interest level of the material, any teacher-provided motivation, and methods of instruction were ignored. At the primary level, the Spache Readability Formula and the Readability Graph were used. For the intermediate-level books, the Dale-Chall Formula for Predicting Readability, the Direct Grade Equivalent Table for the Dale-Chall Formula, the Flesch Readability Formula, and the Fry Readability Graph were applied. It was found that all 41 texts had reading levels at or above the grade level for which they were intended and that 75 of the 128 readability levels obtained were above the designated grade level. References and tables are included. (NH)

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# How Readable Are Our Elementary Social Studies Textbooks?

How readable are social studies textbooks? That is a very relevant question; one that all teachers should ask themselves before saying something like, "Open your textbooks to page 123 and read to 146. Answer the questions on pages 147 and 148."

Textbooks are generally written with the assumption that teachers will carefully guide children through the text. The book is supposed to be a resource rather than the main instrument for learning. In an informal survey of 158 elementary teachers in the Tampa Bay area, only seventy-five stated that they regularily taught social studies and of these seventy-five, seventy-one reported that a textbook was their main teaching tool. The remaining eighty-three did not teach social studies regularily, even though they were the only teachers with whom their children might be studying it. The chief reason for omitting social studies, according to most of the eighty-three teachers, was that the textbooks were too difficult for the children to read easily. Most of the teachers who were using texts said that

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the texts were hard for some children but they felt that most could handle the material. The fact that many of the teachers gave textbook difficulty as reason for not teaching social studies, and moreoever, that almost all who did teach the subject used the textbook as their chief teaching tool, led to an obvious question: Is the reading level of social studies textbooks too difficult for the children who use them?

In 1962, Gates (11) stated that children were then reading better than ever before, so one might assume that with continued progress the reading of social studies should be no problem today. However, Foley in 1951 found that student activities which involved reading were unpopular. Stewart in 1945 reported that drawing and constructing were the activities ranked highest by children, while those that involved reading and writing were ranked low.

Other major investigations have concluded that children care little for social studies. Among the investigations were those by Holmes (1937), Jersild and Tasch (1949), Chase and Wilson (1958), Curry (1963), Herman (1963), and Rice (1963). All of these studies over the years have shown that children ranked social studies either "least liked," or close to it.

If this dislike does exist and if the textbook is an important cause for it, a closer look should be taken at the textbooks being used. An obvious approach was to assess the reading difficulty of textbooks.

Florida has adopted textbooks for all subjects in the elementary and secondary schools. In elementary social studies there are eighteen texts adopted for grades one, two, and three; and twenty-three texts for use in grades four, five, and six; a total of forty-one. Measures of readability were applied to each of the forty-one textbooks.

Two readability formulas were used at the primary grade level: The Spache Readability Formula for Grades I, II, and III (18), and the new Readability Graph by Edward Fry (9).

Four different readability scales were used for grades four, five, and six. They were the Dale-Chall Formula for Predicting Readability (5), the Direct Grade Equivalent Table for the Dale-Chall Formula by Charles Goltz (12), the Flesch Readability Formula (7), and the Fry Readability Graph (9).

Readability formulas use such factors as the number of unfamiliar words, the number of syllables, and/or the number of sentences in a specified sample, with several samplings per text. Usually several samples of 100 words are recommended. In this study the number of samples varied although all readability scales for each level were applied to the same samples. Some primary books were evaluated in their entirety because there was so little printed matter whereas in some upper grade texts a maximum of fifteen samples of 100 words each were used. Research has shown that these readability formulas usually correlate .90 or above with each other and with the reading levels of children (Fry, 10).

Dale and Chall have defined readability as the total of all elements within a specific piece of printed material which affect the success a group of readers may have with it. This success is the extent to which the children understand it, can read it at an optimum speed, and find it interesting. Success also depends upon the reader: his skill in reading, his intelligence, his maturity, his interest, and his purpose in reading.

Obviously, formulas can not measure everything. Chall (2) cautioned that formulas should not be accepted as precise measures of reading difficulty, but rather as approximations; they consider only limited aspects of difficulty. Therefore, she stated, the reported level of difficulty may vary as much as one year in either direction from reality.

Anderson (1) pointed out that by their very nature, readability formulas ignore such factors as the reading level of the student, (his maturity, experience, and motivation) or the interest level of the material.

Therefore, it must be noted that this study evaluated only the reading levels of the forty-one state-adopted social studies textbooks for grades one through six, and ignored the interest level of the material, any motivation provided by the teacher, and methods of instruction. It should also be remembered that the true reading level may vary as much as one year from the level reported.

Table I reports the reading levels obtained for the eighteen social studies textbooks used in grades one, two, and three, as estimated by using the Spache and the Fry Readability Scales. The readability levels are rounded off to the closest grade level. The exact Spache reading level obtained is shown in parentheses by grade and month.

In Table I these results should be noted:

1. Not one of the eighteen books revealed a reading level below the grade for which the text was recommended.
2. Twenty of the thirty-eight readability levels obtained were above the grade level suggested by the publisher.
3. The readability levels obtained by using the Spache Formula were closer to the reading level suggested by the publisher than were those obtained with the Fry Formula.

Although the fact does not appear in Table I it should be noted that the readability levels of samples taken within a single text varied as much as three years.

Table II lists twenty-three state-adopted texts suggested for use in grades four through six with their reading levels as determined by the four readability formulas listed above. The readability levels are rounded off to the nearest grade level. The range of reading scores obtained in varying samples by the "Dale-Chall (Goltz)" contains reading levels obtained from the

TABLE I

Readability Levels of the State Adopted Social Studies Textbooks Recommended For Use in Grades One, Two, and Three as Determined by The Spache and Fry Readability Formulas

| | Spache | Fry Graph |
|---|---|---|
| **THE WORLD CHILDREN LIVE IN SERIES** (Silver Burdett) | | |
| 1. PETS AROUND THE WORLD, Grade 1 | 2 (2.4) | 1 |
| 2. FUN AROUND THE WORLD, Grade 1 | 3 (2.9) | 2 |
| 3. HOMES AROUND THE WORLD, Grade 1 | 3 (2.6) | 2 |
| 4. SCHOOLS AROUND THE WORLD, Grade 2 | 4 (3.7) | 3 |
| **GOING PLACES SERIES** (Ran McNally) | | |
| 5. WHICH WAY? Grade 2 | 3 (2.8) | 2 |
| 6. HOW FAR? Grade 2 | 3 (3.3) | 3 |
| 7. WHERE? Grade 2 | 3 (3.3) | 4 |
| **HEATH SOCIAL STUDIES SERIES** (D. C. Heath) | | |
| 8. A NEW HOMETOWN, primer | 2 (1.6) | 1 |
| 9. IN SCHOOL AND OUT, Grade 1 | 2 (1.7) | 1 |
| 10. GREENFIELD, U. S. A., Grade 2 | 2 (2.2) | 2 |
| 11. COMMUNITIES AT WORK, Grade 3 | 3 (3.1) | 4 |
| **LEARNING FOR LIVING IN TODAY'S WORLD SERIES** (Benefic Press) | | |
| 12. YOU ARE HERE, Grade 1 | 2 (1.9) | 1 |
| 13. YOU AND THE NEIGHBORHOOD, Grade 2 | 3 (2.6) | 3 |
| 14. YOU AND THE COMMUNITY, Grade 3 | 3 (3.4) | 6 |
| **LIVING IN OUR TIMES SERIES** (Allyn and Bacon) | | |
| 15. LEARNING ABOUT OUR FAMILIES, Grade 1, 1962 | 2 (2.2) | 2 |
| 16. LEARNING ABOUT OUR NEIGHBORS, Grade 2, 1962 | 3 (2.6) | 2 |
| 17. LEARNING ABOUT OUR COUNTRY, Grade 3, 1963 | 4 (3.5) | 4 |
| WAY | | |
| **WAYS OF OUR LAND** (Silver Burdett) | | |
| 18. WAYS OF OUR LAND, Grade 3 | 4 (3.7) | 5 |

TABLE II

Readability Levels of the State-Adopted Social Studies Textbooks Recommended for Use in Grades Four, Five, and Six as Determined by Four Readability Scales

| | Dale-Chall | Dale-Chall (Goltz) | Flesch | Fry |
|---|---|---|---|---|
| **FLORIDA HISTORY--GRADES 4-6** | | | | |
| 19. THE STORY OF FLORIDA, Grade 4 Steck Co., 1957 | 4 (4-6)* | 5 (5.2) | 7 | 6 |
| 20. OUR JOURNEY THROUGH FLORIDA, Grade 4 American Book Co., 1957 | 5 (4-8) | 7 (6.6) | 6 | 7 |
| **GEOGRAPHY--GRADES 4-6** | | | | |
| **GEOGRAPHY FOR TODAY'S WORLD SERIES (Silver Burdett Co.)** | | | | |
| 21. OUR BIG WORLD, Grade 4 | 4 (4-5) | 5 (4.7) | 6 | 5 |
| 22. THE AMERICAN CONTINENTS, Grade 5 | 5 (5-6) | 6 (5.8) | 7 | 5 |
| 23. OLD WORLD LANDS, Grade 6 | 5 (4-6) | 6 (5.9) | 6 | 6 |
| **LANDS AND PEOPLES OF THE WORLD SERIES (Ginn and Co.)** | | | | |
| 24. AT HOME AROUND THE WORLD, SECOND EDITION Grade 4, 1965 | 4 (4-5) | 5 (4.8) | 6 | 4 |
| 25. THE UNITED STATES, CANADA AND LATIN AMERICA Grade 5, 1966 | 6 (5-7) | 6 (6.2) | 7 | 7 |
| 26. EURASIA, AFRICA AND AUSTRALIA Grade 6, 1966 | 9 (8-10) | 9 (8.8) | 8 | 7 |
| **PRENTICE-HALL SOCIAL STUDIES SERIES Prentice-Hall, Inc.** | | | | |
| 27. THE EARTH AND OUR STATES, Grade 4, 1965 | 5 (4-6) | 6 (5.5) | 5 | 5 |
| 28. THE AMERICAS, Grade 5, 1964 | 5 (5-6) | 6 (5.7) | 7 | 6 |
| 29. NATIONS AROUND THE GLOBE, Grade 6, 1965 | 6 (5-8) | 7 (6.9) | 7 | 6 |

| SOCIAL STUDIES--GRADES 4-6 | Dale-Chall | Dale-Chall (Goltz) | Flesch | Fry |
|---|---|---|---|---|
| MANKIND IN TIME AND PLACE (Silver Burdett Co.) | | | | |
| 30. LEARNING TO LOOK AT OUR WORLD, Grade 4 | 5 (4-6) | 6 (5.5) | 6 | 4 |
| 31. THE CHANGING NEW WORLD, Grade 5 | 6 (4-7) | 6 (6.1) | 7 | 7 |
| 32. THE CHANGING OLD WORLD, Grade 6 | 6 (4-8) | 7 (7.0) | 7 | 7 |
| HISTORY--GRADES 4-6 | | | | |
| LAIDLAW HISTORY SERIES (Laidlaw Bros.) | | | | |
| 33. GREAT NAMES IN AMERICAN HISTORY,Grade 4 | 4 (4-5) | 5 (4.8) | 7 | 6 |
| 34. OUR COUNTRY, Grade 5 | 5 (5) | 5 (5.3) | 6 | 6 |
| 35. WORLD BACKGROUND FOR AMERICAN HISTORY Grade 6 | 6 (6-7) | 6 (6.4) | 7 | 6 |
| THE ABC HISTORY SERIES (American Book Co.) | | | | |
| 36. UNDER FREEDOM'S BANNER, Grade 4, 1964 | 5 (5-6) | 6 (5.5) | 7 | 7 |
| 37. THE ADVENTURE OF AMERICA, SECOND EDITION Grade 5, 1966 | 6 (4-7) | 6 (6.1) | 7 | 7 |
| 38. DISCOVERING OUR WORLD'S HISTORY, Grade 6, 1964 (Harper and Row) | 6 (4-7) | 7 (6.6) | 7 | 7 |
| 39. THE STORY OF OUR COUNTRY, Grade 5, 1965 (Allyn and Bacon, Inc.) | 5 (5-6) | 6 (5.9) | 8 | 8 |
| 40. DISCOVERING AMERICAN HISTORY, Grade 5, 1965 | 5 (4-6) | 6 (5.5) | 8 | 7 |
| 41. THE NEW WORLD'S FOUNDATIONS IN THE OLD, Grade 6, 1964 | 7 (6-8) | 7 (7.1) | 7 | 7 |

* Range of scores on varied samples.

Goltz Table for the Dale-Chall Formula rounded off to the closest year. The actual scores obtained by this formula are in parentheses.

Analysis of Table II reveals the following information:

1. Only one measurement of one textbook of the twenty-three books evaluated had any readability rating below the teaching level suggested by the publisher. This was the Dale-Chall rating of Old World Lands, a grade six text, published by Silver Burdett Co. It revealed a reading level of fifth grade.
2. Fifty-five of the ninety-two readability levels obtained by all four scales, (more than half), were at least one grade level above the publisher's suggested grade level.
3. The readability levels sampled within a single text ranged from one to five years. (This was especially noticeable where different people were responsible for writing separate parts or chapters within the same text).
4. The Dale-Chall formula ranked the texts closest to the grade levels specified by the publishing companies, while the Flesch method generally revealed a higher rating than the others.

The most important outcomes of this entire study were the findings that all of the forty-one textbooks adopted by the state had reading levels at or above the grade level for which they were

intended and that 75 of the 128 readability levels obtained were above the designated grade level. If the readability levels are accurate, this indicates that only some of the textbooks used in this state (and possibly in other states as well) are appropriate to the average reader while most will require students to be above average readers. None are for the slow or low-achieving child.

Table III shows the rank order correlations calculated among the readability scales and the grade level designated by the publisher. All of the correlations were .95 or higher revealing an increasing difficulty consistent with advancing grade level. The problem is that they also are apparently consistent in being too difficult for the designated grade level.

What does this mean for the teacher? For one thing he should realize that if he has an average class, the chances are that at least half of the children may have some difficulty in reading the textbook. Therefore, it is not enough merely to say, "Open your books and read pages 123 through 146, then answer the questions on pages 147 and 148." He should prepare a social studies lesson (plus other subjects such as science and language arts) as he would a well-prepared reading lesson. He might introduce his lesson with something similar to the following: "Please open your books to page 123. Let's look at the title of the chapter. What does it tell us? Look at the map on pages 128 and 129.

TABLE III

Rank Order Correlations Among Reading Levels Determined by Readability Tests and Grade Level Designated by Publisher

PRIMARY GRADE TEXTS

| | Publisher | Spache |
|---|---|---|
| Spache Readability Formula | .98 | . |
| Fry Readability Graph | .97 | .98 |

INTERMEDIATE GRADE TEXTS

| | Pub. | Dale-Chall | Goltz | Flesch |
|---|---|---|---|---|
| Dale-Chall Formula | .99 | | | |
| Goltz Table for Dale-Chall | .98 | .99 | | |
| Flesch Readability Formula | .95 | .97 | .99 | |
| Fry Readability Graph | .97 | .98 | .99 | .99 |

TABLE IV

Survey of Publishers of State Adopted Textbooks

| Publisher | Readability Test | No Answer |
|---|---|---|
| **Grades I, II, III** | | |
| Allyn & Bacon | Spache | |
| Benefic Press | Author's Discretion | |
| D.C. Heath | Spache | |
| Rand McNally | Reading Specialists | |
| Silver Burdett | Spache | |
| **Grades IV, V, VI** | | |
| Allyn & Bacon | Dale-Chall | |
| American Book | | X |
| Ginn | Dale-Chall | |
| Harper Row | Dale-Chall | |
| Laidlaw Bros. | Dale-Chall | |
| Prentice-Hall | | X |
| Silver Burdett | Dale-Chall | |
| Steck | Author | |

What is it a map of? This is similar to the map in the front of the room and if you prefer to use that one later on, go right ahead. You will find several new words in this chapter, and I have printed them on the board. Repeat them after me. What do each of them mean? You are to read this chapter just to get an idea of the geography of Western Europe and we will discuss it later. This will help us when we take our imaginary trip next week; so we will know what the countries are like and we can decide what to take along. Remember that there are several other books on our library table that have stories about Western Europe. I want Mathew, Mark, Luke, John, and Mary to bring your books up to the chairs in the corner so that we can read the assignment together. Are there any questions? If you get stuck on a word, you may ask a neighbor for help. Now please read pages 123 to 146 for a general view of what the geography of Western Europe is like. If you forget the page numbers, they are written here on the board."

This teacher introduced the material, set a purpose for reading it, developed new vocabulary, provided materials for readers of different reading ability, made sure the assignment was understood, took care of possible discipline problems, and then would be concerned with all children during the entire lesson.

Remember that by law the children have to be there but that poor teachers don't.

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